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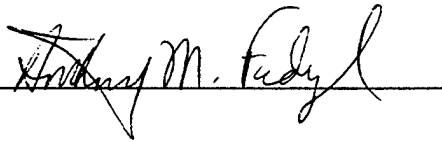
COALITION INTEROPERABILITY: THE LONG POLE IN THE TENT

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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## Abstract of

### COALITION INTEROPERABILITY: THE LONG POLE IN THE TENT

With the collapse of the Soviet Union, the United States' (U.S.) military philosophy is no longer defined by a bipolar relationship with a global peer competitor. Instead, emerging states and transnational belligerents now pose a more diffuse threat to our vital interests. Regional concerns around the world threaten to impact our stability and global economic security while technological innovations allow the actions of potential adversaries to directly impact events internationally.

Driven by reductions in military expenditures and faced with increasing numbers of sophisticated threats, the international community is compelled to cooperate to ensure mutual survival and security. The many military successes enjoyed by the United States and her allies since the Persian Gulf War have demonstrated the effectiveness of coalition warfare as the model for future military operations.

The theater commander will influence the strength and cohesion of regional ad hoc coalitions through the effective integration of forces having diverse capabilities and incongruent national objectives. Interoperability at all levels will remain the central precursor to sustained and militarily credible responses. This paper will clearly identify some of the myriad of challenges associated with political, operational, and technical interoperability while offering solutions to the theater commander to better prepare for future coalition operations.<sup>1</sup>

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## BACKGROUND

The dismantling of the Warsaw Pact at the end of the Cold War ushered in a period of dynamic change to the global landscape. No longer was the United States faced with the specter of mutual nuclear destruction against a clearly defined Soviet threat. That simplistic, bipolar world view defined our approach to national security for the past forty years. With the turn of the century, accelerating rates of international political change have made the future environment more unpredictable and less stable, presenting us with a wide range of potential challenges.<sup>2</sup> We've arrived at a critical juncture with the Cold War threats in our wake and the challenges of the new millenium on the horizon. The United States' active engagement with the world community will be necessary to shape this new environment in order to ensure regional stability and diffuse potential conflicts.

Today, the international environment is comprised of less defined threats, but no less real in their destructive capabilities. The emergence of rogue states such as Iran, Iraq, and Libya; the proliferation of terrorism and other transnational threats; and the instability of failed states such as Haiti, threaten future global security and peace in their attempts to forcefully seize regional power and move toward self-determination.<sup>3</sup> Response by the international community to any aggressive intentions, which significantly alters the status quo, will inevitably lead to the collective commitment of military resources as part of a multinational force to ensure security. Regional solutions to emerging threats will come in the form of a coalition of nations joined by necessity and motivated by the common values of peace, stability, and prosperity.<sup>4</sup> Mutual prosperity in the global marketplace can only be guaranteed through the maintenance of international peace and political/economic security. The

following figures clearly demonstrate the enormous degree of economic interdependence that exists between the United States and Europe:

- U.S. trade with Europe amounts to over \$250B annually
- U.S. companies employ three million people in Europe
- Half the world's goods are produced by the U.S. and European Union (EU)
- 90% of humanitarian aid dispersed throughout the world comes from the U.S. and the EU
- Companies for the EU form the largest investment block in forty one U.S. states
- 56% of U.S. foreign investment occurs in Europe
- Europe purchases 30% of U.S. exports<sup>5</sup>

From a more global perspective, international maritime shipping comprises 95% of the world's trade which translates to over five billion tons and two and one half trillion dollars exchanged.<sup>6</sup> This staggering volume of trade clearly demonstrates the importance of littoral security and freedom of navigation with regard to global peace, stability, and prosperity.

The United States is the global economic leader and a preferred coalition partner of the world community based upon our demonstrated capabilities and commitment to our allies. We have a solid track record of defending U.S. national interests and international responsibilities as evidenced by the restoration of the democratic government in Haiti, the prevention of a protracted war in the Balkans, and the defense of partners in the Middle East. The United States' profound dependence upon global security for economic growth will shape her future international relationships as detailed in the National Security Strategy (NSS):

"We must always be prepared to act alone when that is our most advantageous course. But many of our security objectives are best achieved – or can only be achieved – through our alliances and other formal security structures, or as a leader of an ad hoc coalition formed around a specific objective. Durable relationships with allies and friendly nations are vital to our security."<sup>7</sup>

Additionally, the National Military Strategy (NMS) clearly defines our objectives:

"While we maintain the unilateral capability to wage decisive campaign to protect the U.S. and multinational security interests, our armed forces will most often fight in concert with regional allies and friends, as coalitions can decisively increase combat power and lead to a more rapid and favorable outcome to the conflict."<sup>8</sup>

Coalitions are an ad hoc arrangement between two or more nations for common action while alliances are a more formal agreement for longer term objectives.<sup>9</sup> Typically, coalitions tend to be the more fragile of the two in that they are formed out of a necessity in response to a specific threat. Additionally, the countries involved may not have a history of interaction prior to this partnership and therefore this will pose a significant management challenge for the commander. The unpredictable nature of potential conflicts, complicated by regional cultural issues, will make it difficult for one country to respond unilaterally. Future warfare will be conducted by multinational forces engaged in coalition operations out of mutual necessity.

Coalition warfare is by no means a recent phenomenon nor are its associated challenges and benefits.<sup>10</sup> Napoleon noted the unique character of coalition challenges when he remarked, "The only thing worse than fighting in a coalition is fighting against one."<sup>11</sup> The historical precedent for coalition operations is well documented and can be traced as far back as 431 BC when a group of Lacedaemonians formed a coalition to battle their more powerful Athenian neighbors. In more recent times, during the American Revolution, the colonists joined forces with the French, brought together by shared political, economic, and military goals, to defeat the British. In Europe, World War I was fought primarily between two coalitions, the Central Powers (Germany, the Austro-Hungarian Empire, and Turkey) and the Allies (France, Russia, the United Kingdom, Italy, and eventually the United States).<sup>12</sup> Additionally, World War II, the Korean War, Vietnam, and Operation Desert Storm, virtually all the major conflicts of this century, have been fought as a multinational effort.

It is incumbent upon the theater commander to recognize that each of these cooperative ventures is a distinct organization with its own unique personality. Individual national goals,

missions, and objectives evolve to remain relevant over the lifespan of the coalition straining the commander's leadership abilities. Therefore, the commander must be careful not to limit solutions based solely upon lessons learned from past coalitions for their relevance could very well be limited in the current situation.

The reasons for participating in a multinational operation, as part of a coalition force, are numerous and varied. A country with a less capable military force may seek a coalition response to a regional threat or situation that they are incapable of facing alone. By seeking a coalition response, such a country could optimize its military assets and capabilities in meeting its operational imperatives while minimizing risks and expenditures. Countries that are more self reliant may seek a coalition response due to the common national objectives of the partners. Their international and domestic policies may be aligned and they would prosper from a relationship of mutual support. In the case of a regional or world power, a multinational approach, to resolve a potential regional crisis, would be better tolerated in the court of world public opinion more than a unilateral operation by a superpower.

"Although the world is safer today than when it faced imminent nuclear holocaust during the Cold War, it is by no means free of danger."<sup>13</sup> ABC Evening News reported during their first broadcast of the millenium, that over thirty-five "wars" were being actively waged around the world.<sup>14</sup> Future coalitions will be faced with a myriad of complex situations that cross international borders and blur the conventional definition of war. These complex situations may include: dangers associated with weapons of mass destruction (WMD), transnational threats such as terrorism and international crime, and humanitarian assistance.

Paradoxically, as the number of sophisticated threats increase on the international scene, defense spending continues to fall. The United States Navy's fleet has dwindled from 562



ships at the end of the Cold War to less than 350 presently.<sup>15</sup> Since 1985, the overall Navy/Marine Corps budget has declined 38%, procurement has dropped 70%, and research and development has decreased 40%!<sup>16</sup> Equally alarming have been the reductions in Air Force fighter wings from 38 to 20, Army reductions in combat divisions from 20 to 10, Navy reductions in carrier battle groups from 15 to 12, and military procurement plummeting to the lowest levels since the Korean conflict.<sup>17</sup> The debilitating effects of these reductions are exacerbated when coupled with increases in operational commitments. On average, one-half of the Navy's fleet is underway with one third forward deployed each and every day throughout the year.<sup>18</sup> As military spending declines and requirements for intervention continue to increase worldwide, countries will seek a more integrated approach to defense in order to stretch limited assets to meet their defense needs.

Dwight D. Eisenhower believed that the center of gravity in a coalition is the coalition itself.<sup>19</sup> Therefore, the theater commander must build his organization on a foundation of trust and mutual respect. A coalition is most vulnerable during its formation, not during combat operations as might be expected. In order to be an effective force, nations must join together, bringing with them differing perspectives, and operate in a seamless manner from the initiation of operations. As a result, commanders are faced with the daunting challenge of artfully integrating a vastly diverse mix of forces containing asymmetric capabilities and national objectives.

The key to meeting this objective is the CINC's recognition that there is a seat for everyone at the table regardless of a nation's military/technological sophistication. The significant challenge for the CINC is the integration of multinational forces into a regionally focused coalition that is sized, trained, and equipped to meet future threats. Interoperability at

the political, operational, and technical level will remain the long pole in the tent for coalition operations.

## INTEROPERABILITY CHALLENGES

Clausewitz's assertion that, "Everything in war is very simple, but the simplest thing is difficult" is apropos when critically analyzing coalition interoperability issues.<sup>20</sup> The challenges encountered during multinational operations can accumulate to the point where their cumulative impact results in stagnation of effect and purpose of the force. Theater commanders must harness these challenges so participation in a coalition provides opportunities for increased cooperation, not dissention. Every aspect of a multinational force, administrative and operational, must be carefully managed so whether nations are functioning in a supporting or supported role, their resources and capabilities can be exchanged in a seamless manner. Tangible and intangible impediments to interoperability must be identified and controlled to ensure that an *interoperability gap* does not evolve between participating nations.

Although it is difficult to predict coalition participants in advance, with an understanding of our national interests and an appreciation of regional issues, a theater commander should be able to determine, with some degree of accuracy, future partners. A concerted effort must be made by all possible parties to address and rectify issues associated with **political**, **operational**, and **technical** interoperability to ensure transparency of operations. The following discussion will address these three vital areas of coalition participation.

### Political Interoperability

When addressing political interoperability, national-cultural influences cannot be overlooked. Collectively, they represent the foundation upon which the organization and

objectives of the coalition are constructed. Differences in language, national traditions, socioeconomic status, and a host of other external national influences can have a pervasive impact on coalition operations and command. The theater commander must address these intangible influences with diplomatic dexterity and agility so that conflicts within the coalition are mediated to a mutually acceptable solution. Attention to and mediation of culture-based influences will facilitate rectification of national interoperability issues of policy, doctrine, and Rules of Engagement (ROE).

### Policy

“Those who plan coalition operations cannot escape the impact and role of political actions.”<sup>21</sup> Throughout history, military action was driven by political will and policy such that war was the means by which the political goal was achieved. As Clausewitz stated, “...war is not merely an act of policy but a true political instrument, a continuation of political intercourse, carried on with other means.”<sup>22</sup> The national policies and goals of each coalition nation will dictate the scope of their military participation. The theater commander must continually evaluate levels of commitment so operational activities are not deleteriously affected. Adjustments in focus of effort will be required to adapt to changing national visions.

“Command”, whether exercised nationally, or in a coalition, is an inherently politically bound activity.<sup>23</sup> A country’s military is a manifestation of its national will and therefore command over these forces is a particularly sensitive issue. A theater commander should not anticipate unity of command over the coalition as defined by Western interpretation. What should be pursued is a level of cooperation in action such that the intervention process proceeds in a collective, not conflicting, manner.<sup>24</sup> Because of political realities, recent history indicates that the best a coalition commander should hope to achieve is unity of effort

vice unity of command.<sup>25</sup> It will necessitate effective communication and coordination to employ assets in a complementary manner so true force multiplication is achieved. In Somalia, a lack of interoperability in command and control, doctrine, logistics, staffing procedures, and other areas negatively affected unity of effort.<sup>26</sup> Furthermore, the commander's task is complicated when attempting to incorporate and achieve consensus with groups outside formal organizational relationships (NGOs, PVOs, etc.).

### Doctrine

Limited warning, limited time until execution of operations, language difficulties, and differing national cultures and defense policies add complications that would challenge even long-standing, well-trained alliances.<sup>27</sup> These facts highlight the requirement for regionally authored and accepted doctrinal considerations. Regional doctrine will provide the thread that binds member nations together as motivations evolve and political end states change throughout the operation. Doctrine must reflect a shared coalition mindset, addressing critical areas of coalition command, while not limiting individual styles. It should be a codified guide to action and not a listing of discrete procedures. It is incumbent upon the theater commander to ensure a common understanding of the final product in order to unify the leaders and galvanize the coalition.<sup>28</sup> Such doctrinal considerations will also ensure fidelity in future wargaming and training.

### Rules of Engagement (ROE)

Even though the participants may have similar political mandates, ROE may differ among the nations represented.<sup>29</sup> The circumstances and limitations for interaction may vary greatly between nations in respect to authorized actions, degree of a unit commander's autonomy, and level of engagement. Significant ramifications in response to any single military action by a

member nation can be expected unless prior consensus is achieved. Coalition specific ROE must be understood and accepted by all nations from the outset. The commander must craft coalition ROE in such a way that it clearly addresses anticipated regional concerns and situations without restricting his flexible deployment of forces or compromise the safety and security of any unit. He must modify them as political situations and national climate change to ensure proper interpretation and continued applicability. At a minimum, clarification of hostile intent/act must exist so that expected unit responses are not ambiguous. These responses must address unit self defense as well as the critical concept of collective defense of coalition units. Additionally, the theater commander must ensure that his ROE provides, at a minimum, the same level of self-defense as contained in the individual member's national ROEs.

### Operational Interoperability

Countries fashion a military force to meet their individual national needs, limiting defense spending to a level proportional to the perceived threats. As a result, countries with less sophisticated militaries may be unprepared to contribute significant tangible resources and personnel to a multinational force. Nonetheless, it is important for the theater commander to project a come as you are environment, regardless of assets contributed, so nations are integrated with the assurance of full partnership. Interoperability, once trumpeted as a future goal, is now an operational imperative.<sup>30</sup> Our experiences with coalition warfare have demonstrated that many ad hoc partners, and even long term alliance partners, have insufficient capabilities and resources to properly address the critical issues of

communication, intelligence, and logistics. Potential solutions can be identified and addressed through committed multinational training and exercises.

### Communications

Communications have not kept pace with the requirements of multinational forces and coalition operations. Although unencumbered two-way communications between all levels would provide a common operational picture and improved situational awareness, not all countries possess the equipment or bandwidth to participate in such a comprehensive net. Due to varying levels of electronic sophistication, it may be prudent for the United States to provide the required hardware to all partners or to achieve a mutual agreement to purchase universally available commercial systems. Whichever avenue selected, it is of immediate importance for partner nations to share a seamless, secure communications capability. Experiences in the Balkans demonstrated that a lack of secure communications between allied aircraft allowed the enemy to evacuate facilities prior to impending air strikes.

### Intelligence

Intelligence will remain a sensitive issue due to releasability restrictions associated with some partners. Such limitations on access must be delicately managed to prevent a fracturing of the organization into perceived *haves* and *have nots*. The theater commander may need to assign nations with limited access to tasks within particular missions that are less dependent upon the gathering, analysis, and dissemination of sensitive intelligence. These issues need to be addressed early so that operational decisions are not delayed due to multi-level, security filter requirements once operations have begun.

## Logistics

Normally, nations involved in multinational operations are responsible for the logistic requirements of their forces. Nonetheless, because logistics are a key element of any successful operation, CINC attention is paramount. Multinational logistics need to be flexible, responsive, predictive, and should provide timely sustainment throughout the entire force.<sup>31</sup> Competition for supplies does not have a place in a cooperative operation. As a result, CINC determined priorities for distribution should be based upon the needs of the whole coalition and not one country. Adequate sustainment is dependent upon adequate airlift and sealift assets. During Operation PROVIDE PROMISE, countries comprising the Sarajevo Airbridge consolidated their operations to Ancona resulting in a significant increase in the efficiency of sustainment operations. Such mobility issues for the sustainment of a coalition force will remain a key element in the CINC's logistic equation.

## Training

Joint publications indicate that all services are responsible for preparing forces, trained to the joint environment, to support the theater commander's operational requirements. In the age of coalition warfare, an equally important service consideration is the adequate training of forces for coalition operational requirements. Coalition training is critical in order to mold a group of unrelated nations into an effective force by establishing a level of rapport and validating doctrinal concepts. Regional training will allow assessment of the points of friction as well as commonality in order to effectively weave a conglomeration of militaries into a seamless, lethal multinational force.

Plausible training scenarios should be designed in consultation with representatives from area countries and resourced with anticipated forces and assets. The end result is a shorter



period for a coalition to “ramp up” in response to any threat. To arrive at this point, nations must train their individual forces to regionally derived operational core competencies, while follow-on coalition training focuses on force integration. To be worthwhile, this training needs to occur during periods of peace, and not following the deployment of forces such as in Desert Shield. Training should center on headquarter operations to include critical functions such as communication, intelligence, and logistics. Incorporation of prior approved regional SOP, ROE, and doctrine is essential for fidelity in training.

Through the use of linked computer architectures, CINC sponsored command post exercises (CPXs) could provide a cost effective means to train member nations at their individual national headquarters. Additionally, officer exchanges, as well as liaison officers, would directly impact the establishment of professional respect and positively affect force cohesion. Also, theater commanders could facilitate coalition training through attempts to institutionalize regional training at CINC headquarters.<sup>32</sup> Potential member nations could wargame anticipated regional scenarios in a training environment in addition to refining procedures to function as a rapid reaction, fly-away, coalition headquarters planning team when required.

### Exercises

Military to military interaction is critical whether during virtual training or during formalized exercises. Exercises such as BRIGHT STAR, involving 11 nations and 75,000 troops, provided an opportunity to refine multinational interoperability and innovation.<sup>33</sup> Training such as FLYEX 99 on board U.S.S. Thorn (DD 988), an exercise to assist helicopter crews and shipboard operators hone multinational rotor skills, can also achieve the same ends on a smaller scale.<sup>34</sup> Even familiarization training with multinational weapons at the tactical

level, as accomplished by the 15<sup>th</sup> MEU during their Persian Gulf deployment with foreign militaries, will positively affect coalition cohesion at the operational level.<sup>35</sup>

Consistent, scheduled interactions could be initiated with the designation of a J-7 on the CINC's staff. Aggressive identification of future opportunities to incorporate mandatory national unit training, while deployed, with potential coalition partners would serve two purposes while maximizing return on investment. As stated earlier, even though it can't be accurately predicted whom our ad hoc coalition partners will be, this investment of time and treasure will prove beneficial for all through the professional interaction with militaries of other countries. Lessons learned during training and exercises could be collated by the CINC's multinational staff and disseminated to all partners in order to assess and modify, if required, regionally developed SOPs, ROE, and doctrine.

#### Technological Interoperability

"The strategic imperative of coalition warfare is bringing us closer together than ever before, at the same time a gap in technology is driving us further apart."<sup>36</sup> Anonymous NATO Official

Technological asymmetries can have an insidious effect on the cohesion of a coalition. Depending upon the phase of interaction, the results can range from ineffective training evolutions during peacetime to unequal burden sharing during actual operations. The theater commander must identify and evaluate such potential hindrances to cooperation in networks and platforms.

Technology has advanced to such a level that linked computer hardware fused with intelligence is a significant force multiplier. The fog of war will dissipate once cooperating nations are able to link all forces and platforms with the power of a common picture of the

battle. The challenge will be in linking regional partners whose historical military philosophy has hinged upon the defense of the homeland. Such a myopic vision of the evolving global environment has left them ill-prepared to counter the myriad of emerging sophisticated threats. This lack of preparation was evident during the air campaign over Kosovo. A majority of strike missions were flown by U.S. aircraft, supported by U.S. tanker, radar, and reconnaissance aircraft that benefited from imaging from U.S. navigation, communications, and spy satellites.<sup>37</sup> Only two of the nineteen nations involved had the required weapons to meet military guidance.<sup>38</sup> Operations with technologically unsophisticated partners not only raises the issue of interoperability but also of inequitable assumption of risk and expense. Clearly, national procurement philosophies and uncooperative modernization plans between nations will impact the CINC's flexibility in operations.

The importance of technology will be in the ability to synchronize forces over the horizon, to optimize intelligence products for collective situational awareness, and to include all partners in the coalition process. In order to accomplish this in a timely and cost effective manner, commercial technology which is internationally available, may need to become the standard architecture. During PROVIDE PROMISE, intelligence systems were incompatible and analysts lost time attempting to transfer information across systems and into the theater. Commercially available options would allow all partners to reap the benefits of commonality, while improvements/updates could be easily distributed throughout the coalition to maintain standardization. The advantage of commonality to the commander is that all future coalition partners would benefit from connectivity of merged information systems. Countries participating in a supporting role would also benefit from "virtual" membership. In conjunction with this effort, supplying forces with compatible weapons, would reduce the

CINC's requirement to partition the battlefield based upon technological capability.

Nonetheless, the commander must be cautious not to pay too much attention to technological magic at the expense of organizational, conceptual, and other human inputs needed to convert the magic from lifeless hardware into combat outcomes.<sup>39</sup>

Still, technological interoperability will be difficult to achieve if the gap is not quickly bridged. During the Gulf War, it took the United States approximately 70 soldiers, 27 tons of equipment, and 80 days of training and coordination to create communication interoperability for an average Middle Eastern nation.<sup>40</sup> We would be naïve to think our enemies are living in a vacuum and are not aggressively pursuing technology to neutralize our advances. On the other hand, future enemies might decide not to engage in a costly race for technology superiority, but rather choose to meet coalition efforts asymmetrically. For example, through a studied analysis of our past successes against technologically inferior countries, future adversaries could choose to exploit the coalition's casualty aversion by withdrawing to the cities and using human shields. Further asymmetric options available to an adversary are mines, nuclear weapons, and biological/chemical agents. Sophisticated systems are not immune to attack. Computer technology, while at times a force multiplier, can also be a vulnerability, a potential virtual flank to be attacked. Adversaries could deliver viruses into computer dependent systems, outside the threat envelope, as if they were a "virtual precision guided munition."

General George Patton warned, "people can persuade themselves that war can be won by some wonderful invention rather than by hard fighting and superior leadership."<sup>41</sup> The bottom line is that people will remain the key that unlocks the door to operational success and

coalition interoperability. The commander must seek a balance between people and technology, and precision weapons with decisive maneuver.<sup>42</sup>

## Summary

Regional peace, stability, and prosperity are dependent upon the commitment of nations around the world to the collective defense of common values and goals. Due to the unpredictable nature of potential threats, the theater commander's preparations to meet regional challenges will continue to be a difficult task. He will need to forge a flexible multinational partnership that can adapt to the threats as required. History has clearly shown that when the United States reacts with our partners, we are able to advance collective interests more than if pursuing them unilaterally. Defense initiatives and security architectures need to be shaped by this spirit of cooperation and mutual defense. The CINC can have a direct impact upon achieving consensus through the development of a coalition operational vision where mission success is the objective, not national goals.

For multinational coalitions to function effectively, innovative thinking will be required by the commander to train conventional forces to non-conventional warfare. Commonality in capabilities and assets will provide the commander the opportunity to mass standardized forces against all adversaries across the multitude of mission areas. The theater commander must skillfully merge dispersed philosophies and military sophistication to ensure political, operational, and technical interoperability across his diverse forces.

This paper has identified some of the many issues facing the operational commander and offered the following solutions for future interoperability:

- Determine and refine regional SOP, ROE, and doctrine
- Institutionalize regional training and maximize/formalize multinational exercises

- Establish coalition staff positions and requirements for liaison officers to foster rapport and refinement of procedures
- Determine regional equipment standards
- Standardize computer architecture to maximize connectivity
- Determine minimum operational core competencies
- Refine coalition communication, intelligence, and logistic capabilities
- Establish measures of effectiveness and regional lessons learned database
- Designate a J-7 on CINC staff to aggressively integrate/standardize coalition training

Past successes can't numb multinational sensibilities to the omnipresent danger of evolving international threats. The theater commander must exercise imagination and determination to shape a coalition that is integrated and interoperable so that it will remain a viable, flexible, and agile international security force.

## NOTES

<sup>1</sup> ADM Jay L. Johnson, "Keynote Address," International Seapower Symposium, U.S. Naval War College, Newport, R.I.: 8 November 1999.

<sup>2</sup> U.S. Joint Chiefs of Staff, Joint Vision 2010 (Washington: 1998), 8.

<sup>3</sup> Martha Maurer, Coalition Command and Control (Washington: National Defense University, 1996), 3.

<sup>4</sup> VADM Charles Moore, "Coalition Operations in the U.S. Central Command," International Seapower Symposium, U.S. Naval War College, Newport, R.I.: 8 November 1999.

<sup>5</sup> GEN Wesley K. Clark, "The United States and NATO: The Way Ahead," Parameters, Winter 1999, 2.

<sup>6</sup> ADM Jim Ellis, "Freedom of Navigation," International Seapower Symposium, U.S. Naval War College, Newport, R.I.: 8 November 1999.

<sup>7</sup> The White House, A National Security Strategy for a New Century (Washington: 1998), 2.

<sup>8</sup> U.S. Joint Chiefs of Staff, National Military Strategy of the United States of America (Washington: 1997), 13.

<sup>9</sup> Joint Chiefs of Staff, Joint Doctrine for Multinational Operations (Joint Pub 3-16, Second Final Coordination) (Washington, D.C.: March 23, 1999), vii.

<sup>10</sup> MAJ Peter C. Hunt, Coalition Warfare: Considerations for the Air Component Commander (Maxwell: Air University, 1998), 1.

<sup>11</sup> VADM Charles Moore, "Coalition Operations in the U.S. Central Command," International Seapower Symposium, U.S. Naval War College, Newport, R.I.: 8 November 1999.

<sup>12</sup> Anthony J. Rice, "Command and Control: The Essence of Coalition Warfare," Parameters, Spring 1997, 2.

<sup>13</sup> John Douglas, "Often the Only Option," U.S. Naval Institute Proceedings, February 1998, 2.

<sup>14</sup> ABC News broadcast on the evening of 1 January 2000 as reported by Peter Jennings.

<sup>15</sup> Douglas, 4.

<sup>16</sup> Douglas, 4.



- <sup>17</sup> Steve Buyer, "Recommitting to the Total Force," The Officer, January 1998, 2.
- <sup>18</sup> RADM Robert Nutwell, "Advances in Technology: The Impact on Multinational Operations," RUSI, December 1997, 28.
- <sup>19</sup> Steve Bowman, "Historical and Cultural Influences on Coalition Operations," in Problems and Solutions in Future Coalition Operations, ed. Thomas Marshall (Carlisle: Strategic Studies Institute, 1997), 8.
- <sup>20</sup> Carl Von Clausewitz, On War, trans. and ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1989), 119.
- <sup>21</sup> Maurer, 31.
- <sup>22</sup> Clausewitz, 87.
- <sup>23</sup> Thomas Durell-Young, "Command in Coalition Operations," in Problems and Solutions in Future Coalition Operations, ed. Thomas Marshall (Carlisle: Strategic Studies Institute, 1997), 42.
- <sup>24</sup> General Cevic Bir, "Interoperability and Intervention Operations," RUSI, December 1997, 22.
- <sup>25</sup> Marshall, 43.
- <sup>26</sup> Bir, 24.
- <sup>27</sup> Maurer, 101.
- <sup>28</sup> Bir, 23.
- <sup>29</sup> Joint Chiefs of Staff. Joint Doctrine for Multinational Operations (Joint Pub 3-16, Second Final Coordination) (Washington, D.C.: March 23, 1999), III-19.
- <sup>30</sup> Dean Simmons, "Air Operations Over Bosnia," U.S. Naval Institute Proceedings, May 1997, 63.
- <sup>31</sup> Maurer, 88.
- <sup>32</sup> Michael Smith, "Doctrine and Training: The Foundation of Effective Coalition Operations," in Problems and Solutions in Future Coalition Operations, ed. Thomas Marshall (Carlisle: Strategic Studies Institute, 1997), 73.
- <sup>33</sup> VADM Charles Moore, "Coalition Operations in the U.S. Central Command," International Seapower Symposium, U.S. Naval War College, Newport, R.I.: 8 November 1999.
- <sup>34</sup> Robert Bryans, "USS Thorn Leads Multinational FlyEx '99," All Hands, June 1999, 6.

<sup>35</sup> Fred Smith, "It's Unique Training with Foreign Weapons, Equipment, and Allies," The Leatherneck, January 1999, 26.

<sup>36</sup> Vago Muradian, "NATO Leaders to Unveil New Defense Cooperation Effort," Defense Daily, 26 April 1999, 1.

<sup>37</sup> Vago Muradian, "Solana: Europe Must Improve Capabilities in Kosovo's Wake," Defense Daily, 24 September 1999, 1.

<sup>38</sup> Vago Muradian, "Kosovo Will Be To Post-2000 Defense as the Gulf War Was to the 1990s," Defense Daily, 27 April 1999, 1.

<sup>39</sup> Benjamin Lambeth, "The Technology Revolution in Air Warfare," Survival, Spring 1997, 73.

<sup>40</sup> Robert Scales, "Trust, Not Technology, Sustains Coalitions," Parameters, Winter 1998-1999, 7.

<sup>41</sup> Lambeth, 76.

<sup>42</sup> Earl Tilford, National Defense Into the 21<sup>st</sup> Century (Carlisle: Strategic Studies Institute, 1997), 22.

## BIBLIOGRAPHY

- Ackerman, Robert K. "Kosovo Maps the Future of Information Technologies." Signal, December 1999, 49-55.
- Agee, Collin A. "Too Much Data, Too Little Intelligence." Jane's International Defense Review, May 1997, 3-10.
- Baumel, Jacques. "Europe in a Corner." The Officer, October 1999, 41-44.
- Bender, Bryan. "Exercise Heralds Cross-Regional Training for NATO." Jane's Defence Weekly, 3 November 1999, 1-2.
- Bir, Cevic. "Interoperability and Intervention Operations." RUSI, December 1997, 22-26.
- Bowie, Christopher J. "The Stealth Revolution in Aerial Combat." Air Power History, Winter 1998, 1-14.
- Bryans, Robert. "USS Thorn Leads Multinational FlyEx 99." All Hands, June 1999, 6-8.
- Buyer, Steve. "Recommitting to the Total Force." The Officer, January/February 1998, 26-30.
- Clark, Wesley. "The United States and NATO: the Way Ahead." Parameters, Winter 1999-2000, 2-14.
- Clausewitz, Carl von. On War. Translated and Edited by Michael Howard and Peter Paret. Princeton: Princeton University Press, 1989.
- Clayton, Alison. "JWID Aids Coalition Warfare." Jane's Defence Weekly, 4 August 1999, 1-2.
- Codner, Michael. "Integration and Interoperability: the Who and the What." RUSI, October 1998, 31-42.
- Devers, Jacob L. "Major Problems Confronting a Theater Commander in Combined Operations." Military Review, January/February 1997, 123-130.
- Dixon, Anne. "The Whats and Whys of Coalitions." Joint Force Quarterly, Winter 1993-1994, 26-28.

- Douglass, John. "Often the Only Option." U.S. Naval Institute Proceedings, February 1998, 32-35.
- Dunlap, Charles J. "Joint Vision 2010: A Red Team Assessment." Joint Force Quarterly, Autumn/Winter 1997, 47-49.
- Ellis, Jim. "Freedom of Navigation". International Seapower Symposium. U.S. Naval War College, Newport, R.I.: 8 November 1999.
- Foster, S. "Alliances/Partnering – The Process." The Naval Review, April 1999, 134-138.
- Hobson, Sharon. "Price of Working Together." Jane's Defence Weekly, 8 April 1995, 28-29.
- Hunt, Peter. Coalition Warfare: Considerations for the Air Component Commander. Alabama: Air University Press, 1998.
- Johnson, David. "Cross-Cultural Communication in Coalition Warfare." Special Warfare, July 1993, 9-11.
- Johnson, Jay L. "Keynote Address." International Seapower Symposium. U.S. Naval War College, Newport, R.I.: 8 November 1999.
- Lambeth, Benjamin S. "The Technology Revolution in Air Warfare." Survival, Spring 1997, 65-83.
- Marshall, Thomas, ed. Problems and Solutions in Future Coalition Operations. Carlisle: Strategic Studies Institute, 1997.
- Maurer, Martha. Coalition Command and Control. Washington: National Defense University, 1996.
- McCarthy, James. "Commanding Joint and Coalition Operations." Naval War College Review, Winter 1992, 9-21.
- Medve, John. Integration, Interoperability, and Coalition Warfare in the New World Order. Fort Leavenworth: United States Army Command and General Staff College, 1994.
- Moore, Charles. "Coalition Operations in the U.S. Central Command." International Seapower Symposium. U.S. Naval War College, Newport, R.I.: 8 November 1999.
- Muradian, Vago. "Kosovo Will be to Post-2000 Defense as Gulf War was to 1990s." Defense Daily, 27 April 1999, 1-4.

- \_\_\_\_\_. "NATO Leaders to Unveil New Defense Cooperation Effort." Defense Daily, 26 April 1999, 1-3.
- \_\_\_\_\_. "Solana: Europe Must Improve Capabilities in Kosovo's Wake." Defense Daily, 24 September 1999, 1-2.
- National Academy of Sciences. The Navy and Marine Corps in Regional Conflict in the 21<sup>st</sup> Century. Washington: 1996.
- Neilson, Keith. Coalition Warfare – An Uneasy Accord. Waterloo: Wilfrid Laurier University Press, 1983.
- Neves, Juan. "Interoperability in Multinational Coalitions: Lessons from the Persian Gulf War." Naval War College Review, Winter 1995, 50-62.
- Nutwell, Robert M. "Advances in Technology: The Impact on Multinational Operations." RUSI, December 1997, 27-30.
- Pick, Michael and Kevin Rentner. "CI and HUMINT in Multinational Operations: The Lessons of Vigilant Blade 97." Military Intelligence, January-March 1999, 16-21.
- Prina, Edgar. "Visionary Changes." Sea Power, February 1998, 35-36.
- Rice, Anthony J. "Command and Control: The Essence of Coalition Warfare." Parameters, Spring 1997, 152-167.
- Riscassi, Robert W. "Doctrine for Joint Operations in a Combined Environment: A Necessity." Military Review, January/February 1997, 103-114.
- \_\_\_\_\_. "Principles for Coalition Warfare." Joint Force Quarterly, Summer 1993, 58-71.
- Scales, Robert. "Trust, Not Technology, Sustains Coalitions." Parameters, Winter 1998-1999, 4-10.
- Shannon, Brian. "Odeen: U.S., Allies Face Risk Without Cooperation." Defense Daily, 24 February 1998, 1-2.
- Shea, Jamie. "The Alliance Shapes Its New Personality for the 21<sup>st</sup> Century." RUSI, February/March 1999, 8-13.
- Shelton, Henry. "A Word from the Chairman." Joint Force Quarterly, Spring 1999, 1-5.
- Silkett, Wayne. "Alliance and Coalition Warfare." Parameters, Summer 1993, 82.

Simmons, Dean. "Air Operations Over Bosnia." United States Naval Institute Proceedings, May 1997, 58-63.

Smith, Fred. "It's Unique Training with Foreign Weapons, Equipment, and Allies." The Leatherneck, January 1999, 26-27.

Solana, Javier. "NATO: Prospects for the Next Fifty Years." Joint Force Quarterly, Spring 1999, 35-40.

Stocker, J. "The Limitations of the Joint Approach." The Naval Review, July 1999, 194-196.

The White House. A National Security Strategy for a New Century. Washington: 1998.

Thornberry, Cedric. "Facilitating Cooperation in Multinational Operations." RUSI, December 1997, 31-36.

Tilford, Earl. National Defense Into the 21<sup>st</sup> Century: Defining the Issue. Carlisle: Strategic Studies Institute, 1997.

United States Space Command. Long Range Plan. Peterson Air Force Base: 1998.

U.S. Joint Chiefs of Staff. Joint Doctrine for Multinational Operations (Joint Pub 3-16, Second Final Coordination) Washington, D.C.: March 23, 1999.

U.S. Joint Chiefs of Staff. Joint Vision 2010. Washington: 1998.

U.S. Joint Chiefs of Staff. National Military Strategy of the United States of America. Washington: 1997.

U.S. Joint Chiefs of Staff. Rationalization, Standardization, and Interoperability Policy. CJCSI 2700.01. Washington: 1995.

Walsh, Edward. "Exercise Demonstrates Benefit of Military's Network-Centric Warfare." Signal, November 1997, 16-21.

Wood, Norman. "Intelligence is at a Crucial Crossroad." Signal, October 1999, 14.

Yates, Mark. "Coalition Warfare in Desert Storm." Military Review, October 1993, 46-52.